# UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO.

: 6,872,546 B1

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DATED

: March 29, 2005

INVENTOR(S) : Hastings et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

# Title page,

Item [56], **References Cited**, OTHER PUBLICATIONS, fourth reference should read: -- Lee et al., "A novel secretory Tumor Necrosis Factor-inducible Protein (TSG-6) is a member of the family of Hyaluronate Binding Proteins, closely related to the Adhesion Receptor CD44" Jan. 1992, vol. 116, No. 2, pp. 545-557.\* --.

#### Column 315,

Starting at line 36, before claims, insert the attached sequence listing.

#### Column 317.

Lines 11-19, delete the second subsets (a)-(g).

## Column 318,

Line 9, after "claim 33," insert -- wherein said --.

Signed and Sealed this

Fourth Day of April, 2006

JON W. DUDAS
Director of the United States Patent and Trademark Office

### SEQUENCE LISTING

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- Cys Ser Glu Glu Gln His Lys Ile Val Ala Gly Ser Cys Val Asp Cys 275 280 285

Gln Ala Leu Asn Thr Ser Thr Cys Pro Pro Asn Ser Val Lys Leu Asp Ile Phe Pro Lys Glu Cys Val Tyr Ile His Asp Pro Thr Gly Leu Asn Val Leu Lys Lys Gly Cys Ala Ser Tyr Cys Asn Gln Thr Ile Met Glu Gln Gly Cys Cys Lys Gly Phe Phe Gly Pro Asp Cys Thr Gln Cys Pro Gly Gly Phe Ser Asn Pro Cys Tyr Gly Lys Gly Asn Cys Ser Asp Gly Ile Gln Gly Asn Gly Ala Cys Leu Cys Phe Pro Asp Tyr Lys Gly Ile Ala Cys His Ile Cys Ser Asn Pro Asn Lys His Gly Glu Gln Cys Gln Glu Asp Cys Gly Cys Val His Gly Leu Cys Asp Asn Arg Pro Gly Ser Gly Gly Val Cys Gln Gln Gly Thr Cys Ala Pro Gly Phe Ser Gly Arg Phe Cys Asn Glu Ser Met Gly Asp Cys Gly Pro Thr Gly Leu Ala Gln His Cys His Leu His Ala Arg Cys Val Ser Gln Glu Gly Val Ala Arg Cys Arg Cys Leu Asp Gly Phe Glu Gly Asp Gly Phe Ser Cys Thr Pro Ser Asn Pro Cys Ser His Pro Asp Arg Gly Gly Cys Ser Glu Asn Ala 

Glu Cys Val Pro Gly Ser Leu Gly Thr His His Cys Thr Cys His Lys

Gly Trp Ser Gly Asp Gly Arg Val Cys Val Ala Ile Asp Glu Cys Glu
515 520 525

Leu Asp Val Arg Gly Gly Cys His Thr Asp Ala Leu Cys Ser Tyr Val 530 535 540

Gly Pro Gly Gln Ser Arg Cys Thr Cys Lys Leu Gly Phe Ala Gly Asp 545 550 555 560

Gly Tyr Gln Cys Ser Pro Ile Asp Pro Cys Arg Ala Gly Asn Gly Gly 565 570 575

Cys His Gly Leu Glu Leu Glu Ala Asn Ala His Phe Ser Ile Phe Tyr 580 585 590

Gln Trp Leu Lys Ser Ala Gly Ile Thr Leu Pro Ala Asp Arg Arg Val
595 600 605

Thr Ala Leu Val Pro Ser Glu Ala Ala Val Arg Gln Leu Ser Pro Glu 610 615 620

Asp Arg Ala Phe Trp Leu Gln Pro Arg Thr Leu Pro Asn Leu Val Arg 625 630 635 640

Ala His Phe Leu Gln Gly Ala Leu Phe Glu Glu Glu Leu Ala Arg Leu 645 650 655

Gly Gly Gln Glu Val Ala Thr Leu Asn Pro Thr Thr Arg Trp Glu Ile 660 665 670

Arg Asn Ile Ser Gly Arg Val Trp Val Gln Asn Ala Ser Val Asp Val 675 680 685

Ala Asp Leu Leu Ala Thr Asn Gly Val Leu His Ile Leu Ser Gln Val
690 695 700

Leu Leu Pro Pro Arg Gly Asp Val Pro Gly Gly Gln Gly Leu Leu Gln 705 710 715 720

Gln Leu Asp Leu Val Pro Ala Phe Ser Leu Phe Arg Glu Leu Leu Gln
725 730 735

His His Gly Leu Val Pro Gln Ile Glu Ala Ala Thr Ala Tyr Thr Ile
740 745 750

Phe Val Pro Thr Asn Arg Ser Leu Glu Ala Gln Gly Asn Ser Ser His 755 760 765

Leu Asp Ala Asp Thr Val Arg His His Val Val Leu Gly Glu Ala Leu 770 775 780

Ser Met Glu Thr Leu Arg Lys Gly Gly His Arg Asn Ser Leu Leu Gly 785 790 795 800

Pro Ala His Trp Ile Val Phe Tyr Asn His Ser Gly Gln Pro Glu Val 805 810 815

Asn His Val Pro Leu Glu Gly Pro Met Leu Glu Ala Pro Gly Arg Ser 820 825 830

Leu Ile Gly Leu Ser Gly Val Leu Thr Val Gly Ser Ser Arg Cys Leu 835 840 845

His Ser His Ala Glu Ala Leu Arg Glu Lys Cys Val Asn Cys Thr Arg 850 855 860

Arg Phe Arg Cys Thr Gln Gly Phe Gln Leu Gln Asp Thr Pro Arg Lys 865 870 875 880

Ser Cys Val Tyr Arg Ser Gly Phe Ser Phe Ser Arg Gly Cys Ser Tyr 885 890 895

Thr Cys Ala Lys Lys Ile Gln Val Pro Asp Cys Cys Pro Gly Phe Phe 900 905 910

Gly Thr Leu Cys Glu Pro Cys Pro Gly Gly Leu Gly Gly Val Cys Ser 915 920 925

Gly His Gly Gln Cys Gln Asp Arg Phe Leu Gly Ser Gly Glu Cys His 930 935 940

Cys His Glu Gly Phe His Gly Thr Ala Cys Glu Val Cys Glu Leu Gly 945 950 955 960

- Arg Tyr Gly Pro Asn Cys Thr Gly Val Cys Asp Cys Ala His Gly Leu 965 970 975
- Cys Gln Glu Gly Leu Gln Gly Asp Gly Ser Cys Val Cys Asn Val Gly 980 985 990
- Trp Gln Gly Leu Arg Cys Asp Gln Lys Ile Thr Ser Pro Gln Cys Pro 995 1000 1005
- Arg Lys Cys Asp Pro Asn Ala Asn Cys Val Gln Asp Ser Ala Gly Ala 1010 1015 1020
- Ser Thr Cys Ala Cys Ala Ala Gly Tyr Ser Gly Asn Gly Ile Phe Cys 1025 1030 1035 1040
- Ser Glu Val Asp Pro Cys Ala His Gly His Gly Gly Cys Ser Pro His 1045 1050 1055
- Ala Asn Cys Thr Lys Val Ala Pro Gly Gln Arg Thr Cys Thr Cys Gln 1060 1065 1070
- Asp Gly Tyr Met Gly Asp Gly Glu Leu Cys Gln Glu Ile Asn Ser Cys 1075 1080 1085
- Leu Ile His His Gly Gly Cys His Ile His Ala Glu Cys Ile Pro Thr 1090 1095 1100
- Gly Pro Gln Gln Val Ser Cys Ser Cys Arg Glu Gly Tyr Ser Gly Asp 1105 1110 1115 1120
- Gly Ile Arg Thr Cys Glu Leu Leu Asp Pro Cys Ser Lys Asn Asn Gly
  1125 1130 1135
- Gly Cys Ser Pro Tyr Ala Thr Cys Lys Ser Thr Gly Asp Gly Gln Arg 1140 1145 1150
- Thr Cys Thr Cys Asp Thr Ala His Thr Val Gly Asp Gly Leu Thr Cys 1155 1160 1165
- Arg Ala Arg Val Gly Leu Glu Leu Leu Arg Asp Lys His Ala Ser Phe 1170 1175 1180

- Phe Ser Leu Arg Leu Leu Glu Tyr Lys Glu Leu Lys Gly Asp Gly Pro 1185 1190 1195 1200
- Phe Thr Ile Phe Val Pro His Ala Asp Leu Met Ser Asn Leu Ser Gln 1205 1210 1215
- Asp Glu Leu Ala Arg Ile Arg Ala His Arg Gln Leu Val Phe Arg Tyr 1220 1225 1230
- His Val Val Gly Cys Arg Arg Leu Arg Ser Glu Asp Leu Leu Glu Gln 1235 1240 1245
- Gly Tyr Ala Thr Ala Leu Ser Gly His Pro Leu Arg Phe Ser Glu Arg 1250 1255 1260
- Glu Gly Ser Ile Tyr Leu Asn Asp Phe Ala Arg Val Val Ser Ser Asp 1265 1270 1275 1280
- His Glu Ala Val Asn Gly Ile Leu His Phe Ile Asp Arg Val Leu Leu 1285 1290 1295
- Pro Pro Glu Ala Leu His Trp Glu Pro Asp Asp Ala Pro Ile Pro Arg 1300 1305 1310
- Arg Asn Val Thr Ala Ala Ala Gln Gly Phe Gly Tyr Lys Ile Phe Ser 1315 1320 1325
- Gly Leu Leu Lys Val Ala Gly Leu Leu Pro Leu Leu Arg Glu Ala Ser 1330 1335 1340
- His Arg Pro Phe Thr Met Leu Trp Pro Thr Asp Ala Ala Phe Arg Ala 1345 1350 1355 1360
- Leu Pro Pro Asp Arg Gln Ala Trp Leu Tyr His Glu Asp His Arg Asp 1365 1370 1375
- Lys Leu Ala Ala Ile Leu Arg Gly His Met Ile Arg Asn Val Glu Ala 1380 1385 1390
- Leu Ala Ser Asp Leu Pro Asn Leu Gly Pro Leu Arg Thr Met His Gly 1395 1400 1405

- Thr Pro Ile Ser Phe Ser Cys Ser Arg Thr Arg Pro Gly Glu Leu Met 1410 1415 1420
- Val Gly Glu Asp Asp Ala Arg Ile Val Gln Arg His Leu Pro Phe Glu 1425 1430 1435 1440
- Gly Gly Leu Ala Tyr Gly Ile Asp Gln Leu Leu Glu Pro Pro Gly Leu 1445 1450 1455
- Gly Ala Arg Cys Asp His Phe Glu Thr Arg Pro Leu Arg Leu Asn Thr 1460 1465 1470
- Cys Ser Ile Cys Gly Leu Glu Pro Pro Cys Pro Glu Gly Ser Gln Glu 1475 1480 1485
- Gln Gly Ser Pro Glu Ala Cys Trp Arg Phe Tyr Pro Lys Phe Trp Thr 1490 1495 1500
- Ser Pro Pro Leu His Ser Leu Gly Leu Arg Ser Val Trp Val His Pro 1505 1510 1515 1520
- Ser Leu Trp Gly Arg Pro Gln Gly Leu Gly Arg Gly Cys His Arg Asn 1525 1530 1535
- Cys Val Thr Thr Trp Lys Pro Ser Cys Cys Pro Gly His Tyr Gly 1540 1545 1550
- Ser Glu Cys Gln Ala Cys Pro Gly Gly Pro Ser Ser Pro Cys Ser Asp 1555 1560 1565
- Arg Gly Val Cys Met Asp Gly Met Ser Gly Ser Gly Gln Cys Leu Cys 1570 1580
- Arg Ser Gly Phe Ala Gly Thr Ala Cys Glu Leu Cys Ala Pro Gly Ala 1585 1590 1595 1600
- Phe Gly Pro His Cys Gln Ala Cys Arg Cys Thr Val His Gly Arg Cys 1605 1610 1615
- Asp Glu Gly Leu Gly Gly Ser Gly Ser Cys Phe Cys Asp Glu Gly Trp 1620 1625 1630

- Thr Gly Pro Arg Cys Glu Val Gln Leu Glu Leu Gln Pro Val Cys Thr 1635 1640 1645
- Pro Pro Cys Ala Pro Glu Ala Val Cys Arg Ala Gly Asn Ser Cys Glu 1650 1655 1660
- Cys Ser Leu Gly Tyr Glu Gly Asp Gly Arg Val Cys Thr Val Ala Asp 1665 1670 1675 1680
- Leu Cys Gln Asp Gly His Gly Gly Cys Ser Glu His Ala Asn Cys Ser 1685 1690 1695
- Gln Val Gly Thr Met Val Thr Cys Thr Cys Leu Pro Asp Tyr Glu Gly
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- Asp Gly Trp Ser Cys Arg Ala Arg Asn Pro Cys Thr Asp Gly His Arg 1715 1720 1725
- Gly Gly Cys Ser Glu His Ala Asn Cys Leu Ser Thr Gly Leu Asn Thr 1730 1735 1740
- Arg Cys Glu Cys His Ala Gly Tyr Val Gly Asp Gly Leu Gln Cys 1745 1750 1755 1760
- Leu Glu Glu Ser Glu Pro Pro Val Asp Arg Cys Leu Gly Gln Pro Pro 1765 1770 1775
- Pro Cys His Ser Asp Ala Met Cys Thr Asp Leu His Phe Gln Glu Lys 1780 1785 1790
- Arg Ala Gly Val Phe His Leu Gln Ala Thr Ser Gly Pro Tyr Gly Leu 1795 1800 1805
- Asn Phe Ser Glu Ala Glu Ala Ala Cys Glu Ala Gln Gly Ala Val Leu 1810 1815 1820
- Ala Ser Phe Pro Gln Leu Ser Ala Ala Gln Gln Leu Gly Phe His Leu 1825 1830 1835 1840
- Cys Leu Met Gly Trp Leu Ala Asn Gly Ser Thr Ala His Pro Val Val 1845 1850 1855

- Phe Pro Val Ala Asp Cys Gly Asn Gly Arg Val Gly Ile Val Ser Leu 1860 1865 1870
- Gly Ala Arg Lys Asn Leu Ser Glu Arg Trp Asp Ala Tyr Cys Phe Arg 1875 1880 1885
- Val Gln Asp Val Ala Cys Arg Cys Arg Asn Gly Phe Val Gly Asp Gly 1890 1895 1900
- Ile Ser Thr Cys Asn Gly Lys Leu Leu Asp Val Leu Ala Ala Thr Ala 1905 1910 1915 1920
- Asn Phe Ser Thr Phe Tyr Gly Met Leu Leu Gly Tyr Ala Asn Ala Thr 1925 1930 1935
- Gln Arg Gly Leu Asp Phe Leu Asp Phe Leu Asp Asp Glu Leu Thr Tyr 1940 1945 1950
- Lys Thr Leu Phe Val Pro Val Asn Glu Gly Phe Val Asp Asn Met Thr
  1955 1960 1965
- Leu Ser Gly Pro Asn Leu Glu Leu His Ala Ser Asn Ala Thr Leu Leu 1970 1975 1980
- Ser Ala Asn Ala Ser Gln Gly Lys Leu Leu Pro Ala His Ser Gly Leu 1985 1990 1995 2000
- Ser Leu Ile Ile Ser Asp Ala Gly Pro Asp Asn Ser Ser Trp Ala Pro 2005 2010 2015
- Val Ala Pro Gly Thr Val Val Ser Arg Ile Ile Val Trp Asp Ile 2020 2025 2030
- Met Ala Phe Asn Gly Ile Ile His Ala Leu Ala Ser Pro Leu Leu Ala 2035 2040 2045
- Pro Pro Gln Pro Gln Ala Val Leu Ala Xaa Glu Ala Pro Pro Val Ala 2050 2060
- Ala Gly Val Gly Ala Val Leu Ala Ala Gly Ala Leu Leu Gly Leu Val 2065 2070 2075 2080

Ala Gly Ala Leu Tyr Leu Arg Ala Arg Gly Lys Pro Met Gly Phe Gly 2085 2090 2095

Phe Ser Ala Phe Gln Ala Glu Asp Asp Ala Asp Asp Xaa Phe Ser Pro 2100 2105 2110

Trp Gln Glu Gly Thr Asn Pro Xaa Leu Xaa Xaa Val Pro Asn Pro Val 2115 2120 2125

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Ala Ala Lys Ala Val Cys Gly Gly His Ala Thr Tyr Lys Ala Ala Arg
35 40 45

Lys Gly His Val Cys Ala Ala Gly Trp Met Ala Lys Gly Arg Val Gly 50 55 60

Tyr Val Lys Gly Asn Cys Gly Gly Lys Thr Gly Asp Tyr Gly Arg Asn 65 70 75 80

Arg Ser Arg Trp Asp Ala Tyr Cys Tyr Asn His Ala Lys Cys Gly Gly 85 90 95

Val Thr Asp Lys Arg Lys Ser Gly Asn Tyr Asp Asn Cys Tyr Trp His
100 105 110

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Arg Lys Tyr Gly Arg His Ser Asp Asp Asp Gly Cys Ala Asp Tyr
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                             120
                                                 125
Val Tyr Asp Ser Tyr Asp Asp Val His Gly Val Gly Arg Tyr Cys Gly
                         135
Asp Asp Asp Ser Thr Gly Asn Val Met Thr Lys Ser Asp Ala Ser Val
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                                         155
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                                  Met Val Thr Cys Thr Cys Leu Pro
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Gly Leu Asn Thr Arg Arg Cys Glu Cys His Ala Gly Tyr Val Gly Asp 45  gga ctg cag tgt ctg gag gag tcg gaa cca cct gtg gac cgc tgc ttg Gly Leu Gln Cys Leu Glu Glu Ser Glu Pro Pro Val Asp Arg Cys Leu 60  ggc cag cca ccg ccc tgc cac tca gat gcc atg tgc act gac ctg cac Gly Gln Pro Pro Pro Cys His Ser Asp Ala Met Cys Thr Asp Leu His 75  ttc cag gag aaa cgg gct ggc gtt ttc cac ctc cag gcc acc agc ggc 342 Phe Gln Glu Lys Arg Ala Gly Val Phe His Leu Gln Ala Thr Ser Gly 95  cct tat ggt ctg aac ttt tcg gag gct gag gcg gca tgc gaa gca cag Pro Tyr Gly Leu Asn Phe Ser Glu Ala Glu Ala Ala Cys Glu Ala Gln 110  gga gcc gtc ctt gct tca ttc cct cag ctc tct gct gcc cag cag ctg Gly Ala Val Leu Ala Ser Phe Pro Gln Leu Ser Ala Ala Gln Gln Leu 125  ggc ttc cac ctg tgc ctc atg ggc tgg ctg ctg gcc aat ggc tcc act gcc Gly Phe His Leu Cys Leu Met Gly Trp Leu Ala Asn Gly Ser Thr Ala 140  cac cct gtg gtt ttc cct gtg gcg gac tgt ggc aat ggt cgg gtg ggc 534  His Pro Val Val Phe Pro Val Ala Asp Cys Gly Asn Gly Arg Val Gly	Asp					Gly					Ala					Thr	150
Gly Leu Gln Cys Leu Glu Glu Ser Glu Pro Pro Val Asp Arg Cys Leu  Ggc cag cca ccg ccc tgc cac tca gat gcc atg tgc act gac ctg cac Gly Gln Pro Pro Pro Cys His Ser Asp Ala Met Cys Thr Asp Leu His  75  ttc cag gag aaa cgg gct ggc gtt ttc cac ctc cag gcc acc agc ggc Phe Gln Glu Lys Arg Ala Gly Val Phe His Leu Gln Ala Thr Ser Gly 90  cct tat ggt ctg aac ttt tcg gag gct gag gcg gca tgc gaa gca cag Pro Tyr Gly Leu Asn Phe Ser Glu Ala Glu Ala Ala Cys Glu Ala Gln 105  gga gcc gtc ctt gct tca ttc cct cag ctc tct gct gcc cag cag Gly Ala Val Leu Ala Ser Phe Pro Gln Leu Ser Ala Ala Gln Gln Leu 125  ggc ttc cac ctg tgc ctc atg ggc tgg ctg gcc aat ggc tcc act gcc Gly Phe His Leu Cys Leu Met Gly Trp Leu Ala Asn Gly Ser Thr Ala 140  cac cct gtg gtt ttc cct gtg gcg gac tgt ggc aat ggt cgg gtg ggc His Pro Val Val Phe Pro Val Ala Asp Cys Gly Asn Gly Arg Val Gly					Arg					His					Gly		198
Gly Gln Pro Pro Pro Cys His Ser Asp Ala Met Cys Thr Asp Leu His 75 80 85 85  ttc cag gag aaa cgg gct ggc gtt ttc cac ctc cag gcc acc agc ggc Phe Gln Glu Lys Arg Ala Gly Val Phe His Leu Gln Ala Thr Ser Gly 90 95 100  cct tat ggt ctg aac ttt tcg gag gct gag gcg gca tgc gaa gca cag Pro Tyr Gly Leu Asn Phe Ser Glu Ala Glu Ala Ala Cys Glu Ala Gln 110 115 120  gga gcc gtc ctt gct tca ttc cct cag ctc tct gct gcc cag cag ctg Gly Ala Val Leu Ala Ser Phe Pro Gln Leu Ser Ala Ala Gln Gln Leu 125 130 135  ggc ttc cac ctg tgc ctc atg ggc tgg ctg gcc aat ggc tcc act gcc Gly Phe His Leu Cys Leu Met Gly Trp Leu Ala Asn Gly Ser Thr Ala 140 145 150  cac cct gtg gtt ttc cct gtg gcg gac tgt ggc aat ggt cgg gtg ggc His Pro Val Val Phe Pro Val Ala Asp Cys Gly Asn Gly Arg Val Gly		-	_	Cys				_	Glu				-	Arg			246
Phe Gln Glu Lys Arg Ala Gly Val Phe His Leu Gln Ala Thr Ser Gly 95 100  cct tat ggt ctg aac ttt tcg gag gct gag gcg gca tgc gaa gca cag 390  Pro Tyr Gly Leu Asn Phe Ser Glu Ala Glu Ala Ala Cys Glu Ala Gln 115 120  gga gcc gtc ctt gct tca ttc cct cag ctc tct gct gcc cag cag ctg Gly Ala Val Leu Ala Ser Phe Pro Gln Leu Ser Ala Ala Gln Gln Leu 125 130 135  ggc ttc cac ctg tgc ctc atg ggc tgg ctg gcc aat ggc tcc act gcc Gly Phe His Leu Cys Leu Met Gly Trp Leu Ala Asn Gly Ser Thr Ala 140 145 150  cac cct gtg gtt ttc cct gtg gcg gac tgt ggc aat ggt cgg gtg ggc 534  His Pro Val Val Phe Pro Val Ala Asp Cys Gly Asn Gly Arg Val Gly			Pro					Ser					Thr				294
Pro Tyr Gly Leu Asn Phe Ser Glu Ala Glu Ala Ala Cys Glu Ala Gln 105 110 115 120  gga gcc gtc ctt gct tca ttc cct cag ctc tct gct gcc cag cag ctg Gly Ala Val Leu Ala Ser Phe Pro Gln Leu Ser Ala Ala Gln Gln Leu 125 130 135  ggc ttc cac ctg tgc ctc atg ggc tgg ctg gcc aat ggc tcc act gcc Gly Phe His Leu Cys Leu Met Gly Trp Leu Ala Asn Gly Ser Thr Ala 140 145 150  cac cct gtg gtt ttc cct gtg gcg gac tgt ggc aat ggt cgg gtg ggc His Pro Val Val Phe Pro Val Ala Asp Cys Gly Asn Gly Arg Val Gly		Gln					Gly					Gln					342
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Gly Phe His Leu Cys Leu Met Gly Trp Leu Ala Asn Gly Ser Thr Ala 140 145 150  cac cct gtg gtt ttc cct gtg gcg gac tgt ggc aat ggt cgg gtg ggc His Pro Val Val Phe Pro Val Ala Asp Cys Gly Asn Gly Arg Val Gly		_	-		Ala				_	Leu		_	_	_	Gln	-	438
His Pro Val Val Phe Pro Val Ala Asp Cys Gly Asn Gly Arg Val Gly				Leu					Trp					Ser			486
			Val					Ala					Gly				534

		ctg Leu												582
	_	cgt Arg			_		_	_	-	_	_			630
		Gly ggg												678
		gcc Ala 220												726
		acc Thr												774 .
		tat Tyr												822
		acg Thr						Leu						870
_		cta Leu	_	_		_	_	-		-	_	-	-	918
		ctc Leu 300											agt Ser	966
		cct Pro												1014

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					Gly											1158
					gga Gly											1206
					tct Ser											1254
					caa Gln											1302
					ggc Gly 430											1350
					gac Asp											1398
aag Lys	tga	cga	ggct	ggg (	gctga	aaago	ca ga	aagc	atgca	a ca	ggga	jgag	acca	antti	ta	1454
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Cys Arg Ala Arg Asn Pro Cys Thr Asp Gly His Arg Gly Gly Cys Ser
Glu His Ala Asn Cys Leu Ser Thr Gly Leu Asn Thr Arg Arg Cys Glu
         35
                             40
Cys His Ala Gly Tyr Val Gly Asp Gly Leu Gln Cys Leu Glu Glu Ser
     50
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Glu	Pro	Pro	Val	Asp	Arg	Сув	Leu	Gly	Gln	Pro	Pro	Pro	Суѕ	His	Ser
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Asp Ala Met Cys Thr Asp Leu His Phe Gln Glu Lys Arg Ala Gly Val 85 90 95

Phe His Leu Gln Ala Thr Ser Gly Pro Tyr Gly Leu Asn Phe Ser Glu
100 105 110

Ala Glu Ala Ala Cys Glu Ala Gln Gly Ala Val Leu Ala Ser Phe Pro 115 120 125

Gln Leu Ser Ala Ala Gln Gln Leu Gly Phe His Leu Cys Leu Met Gly
130 135 140

Trp Leu Ala Asn Gly Ser Thr Ala His Pro Val Val Phe Pro Val Ala 145 150 155 160

Asp Cys Gly Asn Gly Arg Val Gly Ile Val Ser Leu Gly Ala Arg Lys
165 170 175

Asn Leu Ser Glu Arg Trp Asp Ala Tyr Cys Phe Arg Val Gln Asp Val
180 185 190

Ala Cys Arg Cys Arg Asn Gly Phe Val Gly Asp Gly Ile Ser Thr Cys 195 200 205

Asn Gly Lys Leu Leu Asp Val Leu Ala Ala Thr Ala Asn Phe Ser Thr 210 215 220

Phe Tyr Gly Met Leu Leu Gly Tyr Ala Asn Ala Thr Gln Arg Gly Leu 225 230 235 240

Asp Phe Leu Asp Phe Leu Asp Asp Glu Leu Thr Tyr Lys Thr Leu Phe 245 250 255

Val Pro Val Asn Glu Gly Phe Val Asp Asn Met Thr Leu Ser Gly Pro 260 265 270

Asn Leu Glu Leu His Ala Ser Asn Ala Thr Leu Leu Ser Ala Asn Ala 275 280 285 Ser Gln Gly Lys Leu Leu Pro Ala His Ser Gly Leu Ser Leu Ile Ile 290 295 300

Ser Asp Ala Gly Pro Asp Asn Ser Ser Trp Ala Pro Val Ala Pro Gly 305 310 315 320

Thr Val Val Val Ser Arg Ile Ile Val Trp Asp Ile Met Ala Phe Asn 325 330 335

Gly Ile Ile His Ala Leu Ala Ser Pro Leu Leu Ala Pro Pro Gln Pro 340 345 350

Gln Ala Val Leu Ala Xaa Glu Ala Pro Pro Val Ala Ala Gly Val Gly 355 360 365

Ala Val Leu Ala Ala Gly Ala Leu Leu Gly Leu Val Ala Gly Ala Leu 370 375 380

Tyr Leu Arg Ala Arg Gly Lys Pro Met Gly Phe Gly Phe Ser Ala Phe 385 390 395 400

Gln Ala Glu Asp Asp Ala Asp Asp Xaa Phe Ser Pro Trp Gln Glu Gly
405 410 415

Thr Asn Pro Xaa Leu Xaa Xaa Val Pro Asn Pro Val Phe Gly Ser Asp 420 425 430

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<213> Homo sapiens

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Lys Gly His Val Cys Ala Ala Gly Trp Met Ala Lys Gly Arg Val Gly 50 55 60

Tyr Val Lys Gly Asn Cys Gly Gly Lys Thr Gly Asp Tyr Gly Arg Asn 65 70 75 80

Arg Ser Arg Trp Asp Ala Tyr Cys Tyr Asn His Ala Lys Cys Gly Gly 85 90 95

Val Thr Asp Lys Arg Lys Ser Gly Asn Tyr Asp Asn Cys Tyr Trp His 100 105 110

Arg Lys Tyr Gly Arg His Ser Asp Asp Asp Gly Cys Ala Asp Tyr 115 120 125

Val Tyr Asp Ser Tyr Asp Asp Val His Gly Val Gly Arg Tyr Cys Gly 130 135 140

Asp Asp Asp Ser Thr Gly Asn Val Met Thr Lys Ser Asp Ala Ser Val 145 150 155 160

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atg ggc ctg ttg ctc ctg gtc cca ttg ctc ctg ctc ccc ggc tcc tac
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Met Gly Leu Leu Leu Val Pro Leu Leu Leu Pro Gly Ser Tyr
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gga ctg ccc ttc tac tac ggc ttc tac tac tcc aac agc gcc aac gac
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Gly Leu Pro Phe Tyr Tyr Gly Phe Tyr Tyr Ser Asn Ser Ala Asn Asp
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cag aac cta ggc aac ggt cat ggc aaa gac cta cnt aat gga gtg aag
                                                                  261
Gln Asn Leu Gly Asn Gly His Gly Lys Asp Leu Xaa Asn Gly Val Lys
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                                                                   309
ctg gtg gtg gag aca ccc gag gag acc ctg ttc acc tac caa ggg gcc
Leu Val Val Glu Thr Pro Glu Glu Thr Leu Phe Thr Tyr Gln Gly Ala
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                         55
agt gtg atc ctg ccc tgc cgc tac cgc tac gag ccg gcc ctg gtc tcc
Ser Val Ile Leu Pro Cys Arg Tyr Arg Tyr Glu Pro Ala Leu Val Ser
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                     70
                                         75
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		caa Gln							501
		gag Glu							549
		gtc Val							597
		cgg Arg							645
		aac Asn 180							693
		gcc Ala							741
		tgc Cys							789
		ttg Leu							837

gge gtg ega age tae gge eee ege eae ege etg eae ege tat gat	885											
Gly Val Arg Ser Tyr Gly Pro Arg His Arg Arg Leu His Arg Tyr Asp												
245 250 255												
gta ttc tgc ttc gct act gcc ctc arg ggg cgg gtg tac tac ctg gan	933											
Val Phe Cys Phe Ala Thr Ala Leu Xaa Gly Arg Val Tyr Tyr Leu Xaa												
260 265 270												
cac cet gag aan etg aen etg aca naa gea agg gaa gee tge caa gaa	981											
His Pro Glu Xaa Leu Xaa Leu Thr Xaa Ala Arg Glu Ala Cys Gln Glu	<b>301</b>											
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200												
aaa t	985											
Lys												
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Leu Val Val Glu Thr Pro Glu Glu Thr Leu Phe Thr Tyr Gln Gly Ala
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                         55
                                              60
Ser Val Ile Leu Pro Cys Arg Tyr Arg Tyr Glu Pro Ala Leu Val Ser
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 65
                                         75
                                                              80
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Gly Asp Tyr Gln Gly Arg Val His Leu Arg Gln Asp Lys Glu His Asp 115 120 125

Val Ser Xaa Glu Ile Gln Xaa Leu Arg Leu Glu Asp Tyr Gly Arg Tyr 130 135 140

Arg Cys Glu Val Xaa Asp Gly Leu Glu Asp Glu Ser Gly Leu Val Glu 145 150 155 160

Leu Glu Leu Arg Gly Val Val Phe Pro Tyr Gln Ser Pro Asn Gly Arg 165 170 175

Tyr Gln Phe Asn Phe His Glu Gly Gln Gln Val Cys Ala Glu Gln Ala 180 185 190

Ala Val Val Ala Ser Phe Glu Gln Leu Phe Arg Ala Trp Glu Glu Gly 195 200 205

Leu Asp Trp Cys Asn Ala Gly Trp Leu Gln Asp Ala Thr Val Gln Tyr 210 215 220

Pro Ile Met Leu Pro Arg Gln Pro Cys Gly Gly Pro Asp Leu Ala Pro 225 230 235 240

Gly Val Arg Ser Tyr Gly Pro Arg His Arg Arg Leu His Arg Tyr Asp 245 250 255

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His Pro Glu Xaa Leu Xaa Leu Thr Xaa Ala Arg Glu Ala Cys Gln Glu 275 280 285

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Ile Phe Ser Gln Arg Gly Gly Asn Val Thr Leu Pro Cys Lys Phe Tyr 50 55 60

His Glu His Thr Ser Thr Ala Gly Ser Gly Thr His Lys Ile Arg Val 65 70 75 80

Lys Trp Thr Lys Leu Thr Ser Asp Tyr Leu Lys Glu Val Asp Val Phe 85 90 95

Val Ala Met Gly His His Arg Lys Ser Tyr Gly Lys Tyr Gln Gly Arg
100 105 110

Val Phe Leu Arg Glu Ser Ser Glu Asn Asp Ala Ser Leu Ile Ile Thr 115 120 125

Asn Ile Met Leu Glu Asp Tyr Gly Arg Tyr Lys Cys Glu Val Ile Glu 130 135 140

Gly Leu Glu Asp Asp Thr Ala Val Val Ala Leu Asn Leu Glu Gly Val 145 150 155 160

Val Phe Pro Tyr Ser Pro Arg Leu Gly Arg Tyr Asn Leu Asn Phe His 165 170 175

Glu Ala Gln Gln Ala Cys Leu Asp Gln Asp Ser Ile Ile Ala Ser Phe 180 185 190 Asp Gln Leu Tyr Glu Ala Trp Arg Ser Gly Leu Asp Trp Cys Asn Ala 195 200 205

Gly Trp Leu Ser Asp Gly Ser Val Gln Tyr Pro Ile Thr Lys Pro Arg 210 215 220

Glu Pro Cys Gly Gly Lys Asn Thr Val Pro Gly Val Arg Asn Tyr Gly 225 230 235 240

Phe Trp Asp Lys Glu Arg Ser Arg Tyr Asp Val Phe Cys Phe Thr Ser 245 250 255

Asn Phe Asn Gly Arg Phe Tyr Tyr Leu Ile His Pro Thr Lys Leu Thr 260 265 270

Tyr Asp Glu Ala Val Gln Ala Cys Leu Lys Asp Gly Ala Gln Ile Ala 275 280 285

Lys Val Gly Gln Ile Phe Ala Ala Trp Lys Leu Leu Gly Tyr Asp Arg 290 295 300

Cys Asp Ala Gly Trp Leu Ala Asp Gly Ser Val Arg Tyr Pro Ile Ser 305 310 315 320

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Gly Phe Pro Asp Lys Lys His Lys Leu Tyr Gly Val Tyr Cys Phe Arg 340 345 350

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gagcacgcca cctgtaag atg aca ggc ccg ggc aag cac aag tgt gag tgt
                                                                    231
                     Met Thr Gly Pro Gly Lys His Lys Cys Glu Cys
 aaa agt cac tat gtc gga gat ggg ctg aac tgt gag ccg gag cag ctg
                                                                    279
 Lys Ser His Tyr Val Gly Asp Gly Leu Asn Cys Glu Pro Glu Gln Leu
              15
                                                       25
 ccc att gac cgc tgc tta cag gac aat ggg cag tgc cat gca gac gcc
                                                                    327
 Pro Ile Asp Arg Cys Leu Gln Asp Asn Gly Gln Cys His Ala Asp Ala
          30
 aaa tgt gtc gac ctc cac ttc cag gat acc act gtt ggg gtg ttc cat
                                                                    375
 Lys Cys Val Asp Leu His Phe Gln Asp Thr Thr Val Gly Val Phe His
      45
                           50
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Page	47	of	60
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L€							cag Gln							423
							gct Ala							<b>471</b>
							aag Lys							519
							tac Tyr							567
					_		ata Ile 130	 _		_			_	615 ·
Se							ttc Phe							663
			_				gtg Val	 _			_			<b>711</b>
	_	_	_	_	_	_	tcc Ser					_	-	759
							aac Asn							807
							tcc Ser 210							855

Page	48	of	60

agt Ser												903
cac His												951
acc Thr									Leu			999
cag Gln												1047
act Thr 285												1095
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His Phe Gln Asp Thr Thr Val Gly Val Phe His Leu Arg Ser Pro Leu 50 55 60

Gly Gln Tyr Lys Leu Thr Phe Asp Lys Ala Arg Glu Ala Cys Ala Asn 65 70 75 80

Glu Ala Ala Thr Met Ala Thr Tyr Asn Gln Leu Ser Tyr Xaa Gln Lys 85 90 95

Ala Lys Tyr His Leu Cys Ser Ala Gly Trp Leu Glu Thr Gly Arg Val
100 105 110

Ala Tyr Pro Thr Ala Phe Ala Ser Gln Asn Cys Gly Ser Gly Val Val
115 120 125

Gly Ile Val Asp Tyr Gly Pro Arg Pro Asn Lys Ser Glu Met Trp Asp 130 135 140

Val Phe Cys Tyr Arg Met Lys Asp Val Asn Cys Thr Xaa Lys Val Gly
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Tyr Val Gly Asp Gly Phe Ser Tyr Ser Gly Asn Leu Leu Gln Val Leu 165 170 175

Met Ser Phe Pro Ser Leu Thr Asn Phe Leu Thr Glu Val Leu Ala Tyr 180 185 190

Ser Asn Ser Ser Ala Arg Gly Arg Ala Phe Leu Glu His Leu Thr Asp 195 200 205

Leu Ser Ile Arg Gly Thr Leu Phe Val Pro Gln Asn Ser Gly Leu Gly 210 215 220

Glu Asn Glu Thr Leu Ser Gly Arg Asp Ile Glu His His Leu Ala Asn 225 230 235 240

Val Ser Met Phe Phe Tyr Asn Asp Leu Val Asn Gly Thr Thr Leu Gln 245 250 255

Thr Arg Leu Gly Ser Lys Leu Leu Ile Thr Asp Arg Gln Asp Pro Leu 260 265 270

His Pro Thr Glu Thr Arg Cys Val Asp Gly Arg Asp Thr Leu Glu Trp 275 280 285

Asp Ile Cys Ala Ser Asn Gly Ile Thr His Val Ile Ser Arg Xaa Leu 290 295 300

Lys Ala Pro Pro Ala Pro Val Thr Leu Xaa His Thr Gly Leu Gly Xaa 305 310 315 320

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- Leu Thr Tyr Ala Glu Ala Lys Ala Val Cys Glu Phe Glu Gly Gly Arg
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- Leu Ala Thr Tyr Lys Gln Leu Glu Ala Ala Arg Lys Ile Gly Phe His 65 70 75 80
- Val Cys Ala Ala Gly Trp Met Ala Lys Gly Arg Val Gly Tyr Pro Ile 85 90 95
- Val Lys Pro Gly Pro Asn Cys Gly Phe Gly Lys Thr Gly Ile Ile Asp 100 105 110
- Tyr Gly Ile Arg Leu Asn Arg Ser Glu Arg Trp Asp Ala Tyr Cys Tyr 115 120 125
- Asn Pro His Ala Lys Glu Cys Gly Gly Val Phe Thr Asp Pro Lys Arg 130 135 140
- Ile Phe Lys Ser Pro Gly Phe Pro Asn Glu Tyr Asp Asp Asn Gln Val.
  145 150 155 160'
- Cys Tyr Trp His Ile Arg Leu Lys Tyr Gly Gln Arg Ile His Leu Ser 165 170 175
- Phe Leu Asp Phe Asp Leu Glu His Asp Pro Gly Cys Leu Ala Asp Tyr 180 185 190
- Val Glu Ile Tyr Asp Ser Tyr Asp Asp Val His Gly Phe Val Gly Arg 195 200 205
- Tyr Cys Gly Asp Glu Leu Pro Glu Asp Ile Ile Ser Thr Gly Asn Val 210 215 220
- Met Thr Leu Lys Phe Leu Ser Asp Ala Ser Val Thr Ala Gly Gly Phe 225 230 235 240
- Gln Ile Lys Tyr Val Thr Val Asp Pro Ala Ser Lys Ser Ser Gln Ala 245 250 255
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gactctagag gat
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